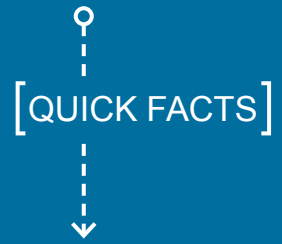


Regional Costs of Climate-Related Hazards

for the New York State Building Sector

Buildings are part of the most important and ubiquitous elements of modern life. They are found in every corner of the State and play a role in daily life. They are also some of the most economically significant investments we make as a civilization. In total, New York State is home to more than 5 million buildings, which takes up 13 billion square feet of space, valued at approximately \$2 trillion. As our climate and exposure to these elements change, buildings must adapt.



[QUICK FACTS]

KEY FINDINGS

- Hurricanes have been the most destructive climate-related event in terms of total, statewide property-damage costs
- Hurricanes take a toll on the whole State, not just NYC
- Flooding events are widespread, frequent, and costly
- NYC and Long Island sustained the most building damage, but did not sustain the most damage per total building value
- The Tug Hill Plateau Region has had the lowest exposure to climate hazards

Decentralized regions are generally hit harder economically than regions with bigger cities and more populated areas.



How is the building stock vulnerable?

1 A critical first step in adaptation is to understand the current vulnerabilities of our building stock. Four major hazard types are seen as the largest threats, both currently and historically, in terms of building-related economic losses as we continue to experience a changing climate: winter storms, hurricanes, severe storms, and flooding.

How do climate hazards result in economic losses and property damage?

2 Between 1960 and 2014, the most significant hazards statewide, in terms of property damage, were hurricanes and flooding. Hurricanes caused more than \$11 billion in damages from infrequent, severely destructive events—Superstorm Sandy alone caused roughly \$10.75 billion in property damage. Flooding was more widespread and occurred much more regularly. Over time, flooding caused more than \$7 billion in property damage losses across New York State.

How are there disproportionate losses between regions?

3 From 1960 to 2014, the NYC region had \$11.32 billion in total damages, accounting for 0.8% of its total building stocks' value. The Catskill Mountains region's damages for that period total at \$3.92 billion, accounting for 3% of their total building stock's value. This suggests that less populated regions may be disproportionately affected by hazard events.

What hazards have caused significant damage?

4 Western New York has been affected most by winter storms, which cost an average of \$1.54 million per event. Hurricanes have caused the most damage in the eastern part of the State, from NYC up to the Adirondack Mountains, costing from \$4.56 million to \$3.60 billion per event. Flooding has caused the most damage in Central New York, along the Southern Tier and the Tug Hill Plateau, costing between \$7.33 million and \$0.45 million per event.

What is adaptive capacity?

5 Adaptive capacity is the ability to prepare for and recover from hazard events. This depends on a network of building owners, developers, design and construction professionals, material suppliers, and property managers. Regions that don't have a large central city may have lower adaptive capacities.

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